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ABSTRACT

Written and developed to assist speech and language clinicians in the ongoing process of providing support for classroom teachers in their efforts to enhance the oral language of their students, this manual provides a rationale and intervention activities for improving oral language in the classroom. The manual first discusses research supporting direct instruction in oral communication skills. It then describes previous studies conducted by area education agencies in Iowa to determine students' mean length of responses in the classroom setting and teachers' assessment of performance of speech and language impaired students. It also reports on a survey of teachers indicating that speech and language clinicians should become more actively involved in teaching oral language in the public schools. Next the manual describes procedures and results of a project to determine mean length response rates for a group of summer school students, to study and develop simple procedures for speech clinicians to assist teachers, and to develop an inservice guide for speech clinicians to that end. It also outlines the inservice procedure. Finally, the manual discusses the initiation of intervention procedures, which focused on those teacher prompts that yielded the highest response lengths during questioning ("how," "why," and "tell me"). The teacher survey, classroom probe for oral language, and results of daily mean length responses to instructor prompts before and after intervention are appended. A three-page bibliography concludes the document. (HTH)

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Beyond Tradition

Innovative Enhancement Of Oral Language In The Classroom

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BEYOND TRADITION

INNOVATIVE ENHANCEMENT OF ORAL LANGUAGE IN THE CLASSROOM

by

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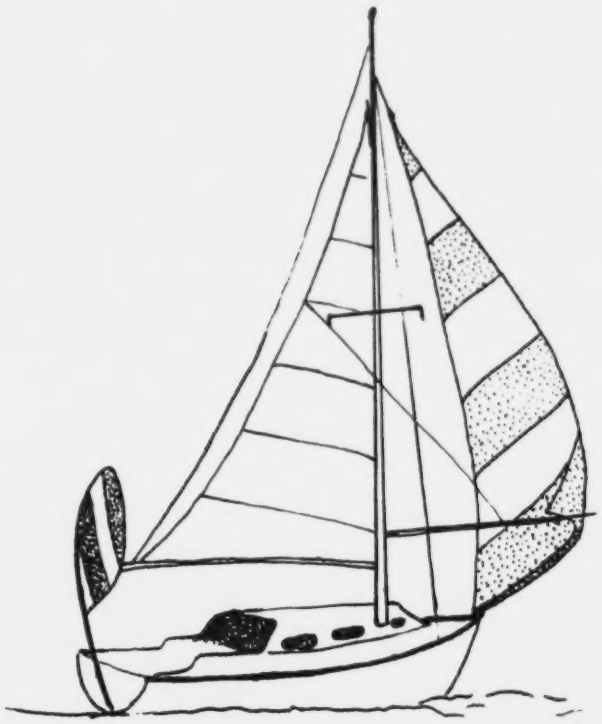
July, 1984



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INNOVATIVE ENHANCEMENT OF ORAL LANGUAGE IN THE CLASSROOM

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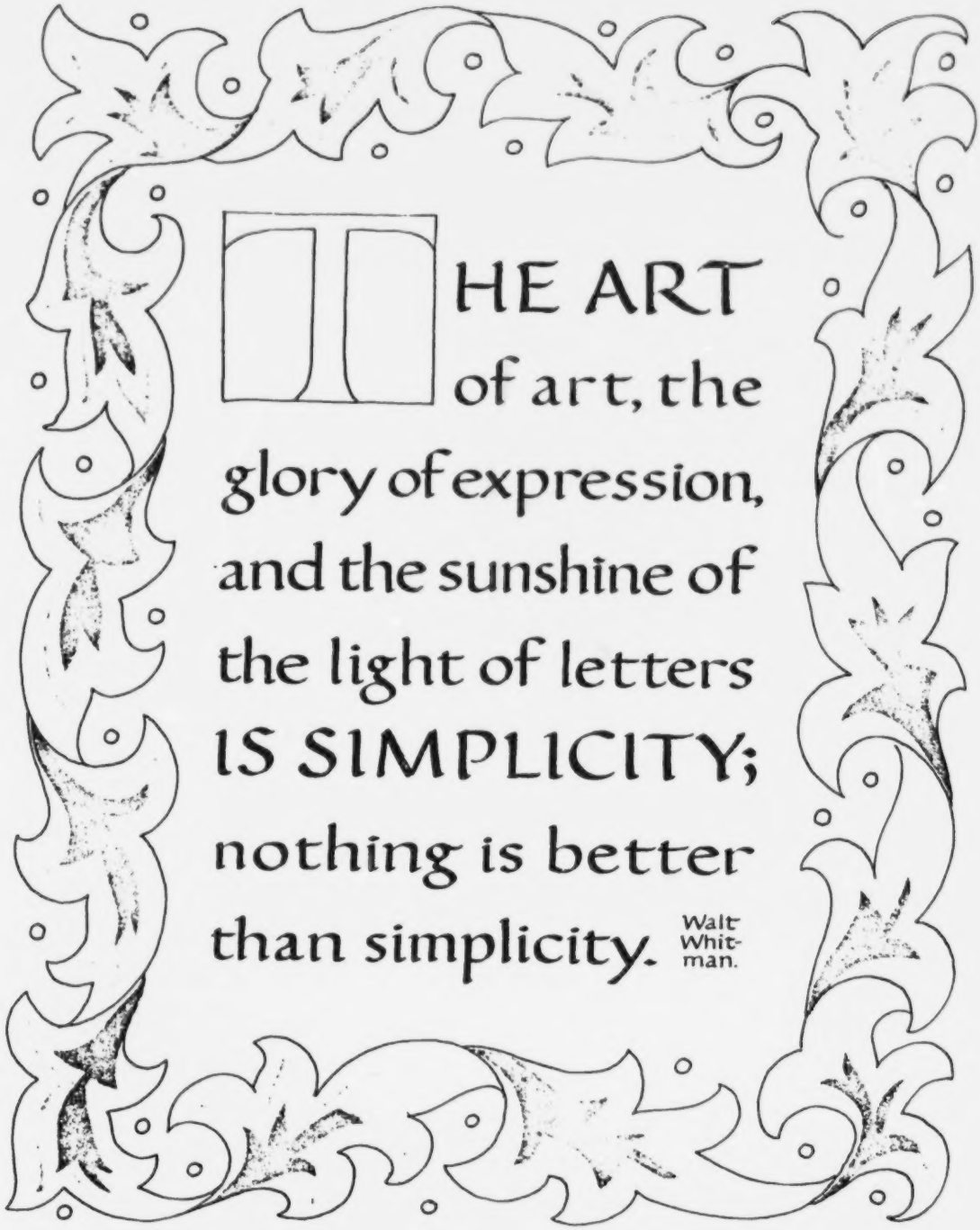
Introduction

This manual was written and developed to assist Speech and Language Clinicians in the on-going process of providing support for classroom teachers in their efforts to enhance the oral language of their students. The scope is somewhat limited due to time constraints, however, the impact of a simple intervention technique as described here can be powerful.

"Aspects of language and cognition have been treated as separate entities, ... language arts curriculum, question-asking behavior of teacher... etc. Language cannot be taught in a vacuum; it is a continuously interacting phenomenon. A great need exists to provide a framework focusing on the process of assessing the language interactions within the environment of the classroom."

Kenneth D. Barker
Project Director
Supervisor Speech and
Language Services
AEA #16


THE ART
of art, the
glory of expression,
and the sunshine of
the light of letters
IS SIMPLICITY;
nothing is better
than simplicity.
Walt
Whit-
man.

Oral Language Rationale

There appear to be some concerns that students in "normal" classrooms need to make improvements in their oral language skills. According to Pickering and Kaelber (Federal Grant Proposal, 1979), "Throughout the country, teachers are becoming increasingly cognizant of the need to emphasize communication development, specifically language and speech as an integral part of regular classroom curriculum. This increased interest is apparently because of their greater awareness of at least three factors: (1) the relationship of reading to language and speech, (2) the relationship of meaning and concept development to language and speech and (3) the growing importance of the field of linguistics."

Also, Speech/Language Clinicians receive many referrals of students who reportedly have an inability to express themselves, but, when language testing is completed, these students are found to be "normal." There appears to be a lack of a valid testing instrument and available normative data for expressive language skills in elementary age students. Speech clinicians continue to feel pressure from teachers to actively do something about this so called "normal" population.

Pickering and Kaelber continue; "At the same time, Speech/Language pathologists' responsibilities in the schools have been expanded to include a communication development

component, as well as the more traditional components for communication deviations and disorders."

Much has been written concerning the role of oral language skills as a tool to manage the environment. People are naturally gregarious social beings who wish to be with others, talk with them, to share problems and joys. Language is a part of life and living. Gratifying relationships, whether interpersonal or international, rest on fairly clear-cut, honest communication of ideas, feelings and attitudes.

According to Pollak and Gruenewald (In assessment of Language Interaction in Acedemic Tasks, 1976), "Language is a bridge by which the student and teacher interact whether it be in a math lesson or directions for management. Language is constantly used to express concepts, feelings, ideas and to learn new information... It is a vehicle for organizing and constructing the student's environment. The teacher has many opportunities for observing the student's understanding and usage of language in learning. She is in a unique position to collect the information and to analyze how failures take place, thus becoming the logical person to do the initial assessment and language interaction in the curriculum." It has become apparant to speech clinicians that there seems to be little or no formal oral language training in most curricula. Most language instruction within existing curricula seems to be through teaching reading and

writing skills with little attention given to oral language skills. A survey taken of language books used in a large elementary school system revealed that 90% of the activities presented were non-oral activities.

In 1980, the Department of Health, Education, and Welfare in the Federal Register, (volume 45, number 100, 1980, section 162.1), identified oral language as a basic skill. "... contain regulations for a number of programs to improve achievement in and mastery of the basic skills of reading, mathematics, oral and written communication."

A position paper entitled "What Do We Know About Standards for Effective Basic Skills Programs" by the U.S. Department of Health, Education and Welfare stated: "Adequate oral communication frequently determines an individual's educational, social and vocational success. Yet, American education has typically neglected formal instruction in the basic skills of speaking and listening." These suggested standards of 1979 from the American Speech-Language and Hearing Association also suggested a definition and some basic assumptions: "Definition - Oral Communication: the process of interacting through heard or spoken messages in a variety of situations.

Basic Assumptions

1. Oral communication behaviors of students can be improved through direct instruction.

2. Oral communication instruction emphasizes the interactive nature of speaking and listening.

3. Oral communication instruction addresses the everyday communication needs of students and includes emphasis on the classroom as a practical communication environment.

4. There is a wide range of communication competence among speakers of the same language.

5. Communication competence is not dependent upon use of a particular form of language.

6. A primary goal of oral communication instruction is to increase the students' repertoire and use of effective speaking and listening behaviors.

7. Oral communication programs provide instruction based on a coordinated developmental continuum of skills, pre-school through adult.

8. Oral communication skills can be enhanced by using parents, supportive personnel, and appropriate instructional technology.

According to "Iowa Basic Skills Improvement Plan", published by Iowa State Department of Public Instruction (1979) an effective oral communication program has some of the following characteristics:

> "...The oral communication program is based on current theory and research in speech and language development, psycho-linguistics, rhetorical and communication theory, communication disorders, speech science and related fields of study..."
>
> "...The oral communication program provides class time for systematic instruction in oral communication skills, e.g., critical listening, selecting, arranging and presenting messages, giving and receiving constructive feedback, non-verbal communication..."
>
> "...The oral communication program includes development of adequate and appropriate language, articulation, voice, fluency and listening skills necessary for success in educational career, and social situations through regular classroom instruction, co-curricular activities, and speech-language pathology and audiology services..."

"...Oral communication program instruction encourages and provides appropriate opportunities for the reticent student (e.g., one who is excessively fearful in speaking situations) to participate more effectively in oral communication..."

"...Oral communication instruction is provided by individuals adequately trained in oral communication and/or communication disorders, as evidenced by appropriate certification..."

"...The oral communication program includes a system for training classroom teachers to identify and refer students who do not have adequate listening and speaking skills, or are reticent, to those qualified individuals who can best meet the needs of the student through further assessment and/or instruction..."

"...Teachers in all curriculum areas receive information on appropriate methods for, a) using oral communication to facilitate instruction, and b) using the subject matter to improve students' oral communication skills..."

"...The oral communication program is facilitated by availability and use of appropriate instructional materials, equipment and facilities..."

"...Speaking and listening needs of students will be determined by qualified personnel utilizing appropriate evaluation tools for the skills to be assessed, and educatonal levels of students being assessed..."

"...Evaluation of student progress in oral communication is based upon a variety of data including observation, self-evaluations, listeners' responses to messages, and formal tests..."

"...Evaluation of students' oral communication encourages, rather than discourages students' desires to communicate, by emphasizing those behaviors which students can improve, thus enhancing their ability to do so..."

This information along with the increased interest of area teachers in utilizing the skills of Speech/Language

Clinicians in a consultant role, led the AEA #16 speech/language service staff to begin to study this problem.

In previous probe data, the AEA #16 speech staff gathered information which indicated students' mean length of responses in the classroom setting. This data was taken from classroom observation by counting the mean length of responses in one elementary school in grades K through 5 for 15 minute segments. The average length of response for each grade level was established to see whether further study was appropriate. This preliminary probe indicated relatively short length of responses for the observed group of students. Because of the wide variability of the data obtained, the staff decided that further information should be gathered in a more structured setting with more stringent controls.

Another study was conducted by four AEAs in Iowa in which speech clinicians were utilizing the Iowa Severity rating scale. In this study, the classroom teachers were asked to judge academic performance of speech and language impaired students in the areas of: overall communication ability, general academic performance, reading, math and social relations, and general emotional adjustment. The initial data indicated that teacher perception was that students with speech and language problems were generally having difficulties some of the time in the areas studied.

This study also lent support to the theory that there is a relationship between classroom performance and oral language skills.

Speech and language clinicians are trained to deal with communication disorders which require direct intervention. A large segment of time is alotted for therapy schedules on a one to one or small group basis. There are speech clinicians who do some speech intervention in the classroom in the form of: (1) speech and language stimulation and (2) commercial speech and language stimulation kits. These exercises deal with specific language forms or encourage group listening skills, and other various language activities. However, these activities are most often conducted on a schedule of once or twice weekly from fifteen to thirty minutes in length. The curriculum demands of the regular school day leave little time for teachers to work with specific objectives or to follow up with the language drills on a daily basis. The responsibility to develop, encourage and promote good oral language in the classroom appears to have become that of the speech clinician. The overall philosophy and organizationn of many public school speech service agencies does not lend itself to providing a total language curriculum, and few speech clinicians are certified to both teach and remediate in a classroom environment. However, the role of the speech and language clinician is to "provide program goals for prevention-oriented sequenced

curricular activities to help pupils develop communicative behaviors in appropriate social, educational and cultural concepts to all pupils in regular or special educational classes." (American Speech and Hearing Association Standards and Guidelines, 1973).

A survey taken in an AEA #6 Federak Grant Proposal was given to 15 teachers with the following questions.

1.*Do you make an effort to teach expressive language? 1 yes 14 no

2. Have you been trained to teach oral language skills in the classroom? 0 yes 15 no

3. Do you feel that your students have good oral language skills? 2 yes 13 no

4. Does your speech clinician do classroom language activities in your room? 0 yes 15 no

5. Does your speech clinician consult with you concerning classroom language activities? 2 yes 13 no

6. Do you feel your students express themselves better in writing or orally? 4 orally 11 writing

7. Do you feel a need to improve your students oral language skills? 15 yes 0 no

* (N 15= grades K-6)

The results of this questionnaire indicate that teachers feel a need to improve their students's expressive language abilities. One author writes: "Vocal expression is a part of most activities in school, but the imitation of an expression of ideas is often sorely lacking. Children in school are generally recipients rather than active participants and the expression of ideas is generally a regurgitation of rote process, offering little opportunity to manipulate ideas themselves".

In preparation for this manual, a teacher survey was conducted in April, 1984. The questions required teaching professionals to relate their concerns about communicative disorders with which they must deal in their specific classroom assignment. The educators involved were teachers of grades K to 5. The elementary school had a population of 390 children. The following is a compilation of the remarks expressed on the survey. Form 1 - Addendum.

1. Children do not seem to listen.
2. Children do not follow oral or written direction.
3. Children can not stay or talk during the oral reading session.
4. Children many times do not volunteer answers or readily participate in class discussion.
5. Many children tend to be unsure of vocabulary.
6. Some children speak in a low, soft voice.
7. Children have difficulty asking direct questions.
8. Some can not express ideas in a clear way during class discussion.
9. Some children have difficulty communicating with teaching staff and classroom peers.
10. Social and emotional adjustments - Some students have few friends, uneasy in group activities, isolate selves.

It appears that speech and language clinicians should become more actively involved with the teaching of oral language in the public school setting. However, the survey indicated some teacher misunderstanding concerning the types of difficulties which point to language as the primary problem as opposes to social, emotional, or intelluctual problems. Many of the concerns related by the teachers in this survey could be found on psychological

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referrals and rarely on speech and language referrals.

It appears evident from both inquiries that many teachers would readily accept some kind of assistance with oral language development in the classroom. This suggests that many teaching professionals might benefit from inservice information regarding the appropriate levels of normal oral language development for students of various ages.

Within this framework, then, this current project was directed to:

1. Study and gather base rates for M.L.R. (mean length response) for a summer school class of "normal" students (reading and math).
2. Research existing information for improving oral language in the classroom.
3. Study and develop simple procedures for Speech Clinicians to assist teachers with this problem in a consultative manner.
4. Develop an inservice guide for speech clinicians using the intervention procedures.

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Description of Students

The students in this study consisted of three age groups: six, seven, and eight year-olds taking summer reading and math classes. Twenty-three students were involved in the total study. Of these twenty-three children, ten were in reading class, and ten were in math class. Three students were in combined reading and math classes. The classes consisted of students from various elementary schools throughout the Burlington Community School District. The students were representative of a cross-section of socio-economic groups from the community. Students participating in these classrooms were referred by their respective teachers for reading or math enrichment. The students reflected no unusual learning problems as reported from school records. A few of the students did exhibit articulation errors, with ratings of 2 to 3 on the Iowa Severity Rating Scale. However, these phonemic errors were judged to be of no significance to this particular study.

Methods

Two basic types of tests were administered during the first week of classes. The Wiig-Semel Test of Linguistic Concepts was administered to all students in order to test for strengths and weaknesses in spatial, passive, temporal, and comparative relationships. The B.C.S. Expressive

language inventory, which essentially collects a spontaneous language sample, was not only administered as a pre-test but also as a post-test. Both of these tests appeared to test some of the skills required for reading comprehension, expression and orientation.

The B.C.S. Language inventory is a test developed and normed in AEA #16 on a total of 500 students. This test is a series of ten pictures, cut from magazines, which are presented to the student in the following ways:
1. "Name as many objects as you can in this picture."
2. "Now tell a story about this picture."
The examiner writes down everything the student says for each plate. This test allowed the clinicians to analyze several aspects of the students' expressive language.

The total number of nouns named in the picture, the total number of words used in a sentence, and the total number of sentences used to tell the story were recorded. In order to restrict the student from learning from the testing tool, the first five (5) plates were administered as a pre-test and the second five (5) plates as a post-test. The Wiig-Semel Test of Linguistic Concepts was used as a pre-test to qualify the group as average students with few language problems. The following group scores appear to reflect adequate skills in comprehension of relationships (Wiig-Semel), but appear to show lower than average mean length of responses and word counts (B.C.S. pre-test, Tables

1 and 2).

TABLE 1

BCS EXPRESSIVE LANGUAGE INVENTORY
NORMATIVE DATA

Grade	Avg # of Words Task #1 10 plates (naming)	S.D.2	Avg # of Words Task #2 10 plates (story)	S.D.2	# of Full Sentences present in Task #2 10 plates (story)	S.D.2	Mean Length Sentences #2 - 10 (story)
Kdg.	8.1	2.8	19.9	4.4	3.2	1.8	8.3
1st	8.3	2.8	25.8	5.0	2.8	1.6	10.5
2nd	10.4	3.2	35.0	5.9	3.9	1.9	10.4
3rd	10.9	3.3	31.5	5.6	2.4	1.5	14.1
4th	10.8	3.2	39.8	6.3	3.7	1.9	13.4
5th	12.4	3.5	38.3	6.1	2.6	1.6	
6th	11.6	3.4	45.7	6.7	3.2	1.8	15.9

The students were asked to complete 2 tasks:

#1. Look at this picture and name as many things as you can.
#2. Now tell me a story about the picture.

Data was calculated in the following manner:

1. Total number of words for Task #1 (naming)
2. Total number of words for Task #2 (story)
3. Total number of full sentences (story) Task #2
4. Mean sentence length Task #2 (story)

The test was given to 500 normal language students in Kindergarten through 6th grade. Each plate and task was averaged with the above results.

TABLE 2

WIIG-SEMEL PRETEST

Six Year Olds						
	Temporal	6.0	Mean	6.50	S.D.	1.50
	Spatial	5.7		4.73		2.06
	Passive	5.7		6.60		1.43
	Comparative	8.3		7.70		1.55
Seven Yr. Olds						
	Temporal	5.8	Mean	6.53	S.D.	1.53
	Spatial	7.5		7.23		1.52
	Passive	6.3		7.80		1.54
	Comparative	7.9		8.10		1.33
Eight Yr. Olds						
	Temporal	7.4	Mean	6.77	S.D.	1.75
	Spatial	7.7		8.13		1.43
	Passive	8.0		7.83		2.03
	Comparative	8.0		8.50		1.28

BCS ORAL LANGUAGE PRETEST SCORES

Age	Ave # Words Naming	Norm		Ave # Words Story	Norm		Ave # Sentences	Norm	
			S.D.			S.D.			S.D.
6	6.86	8.1	2.8	18.93	19.9	4.4	2.13	3.2	1.8
7	6.71	8.3	2.8	15.36	25.8	5.0	2.44	2.8	1.6
8	8.95	10.4	3.2	20.00	35.0	5.9	2.57	3.9	1.9

Procedures

The procedures for this project were implemented by two speech/language clinicians. The students were administered the pre and post test examinations in a room separate from the classroom. Initial mean length of response base-line data, and all intervention procedures, were conducted in the classroom. The classroom teacher cooperating in this project had over ten years of classroom teaching experience.

The procedures called for a measurement of the students' mean length of response (MLR), as defined in Terminology of Communication Disorders Speech, Language and Hearing (Nicolosi et al, Hughes - Till, 1982); and defined by Micolosi, Harryman and Krisheck as the "average number of words used in a number of separate utterances, which may be words, phrases or sentences; determined by dividing the number of words by the number of utterances." A qualitative measurement of the classification (type of questions) of teacher stimulus was also obtained. For the purpose of base line data, no special instructions were given to the teacher regarding her stimulus presentation (type of questions), and no discussion of the type of question used was conducted with the students prior to initiation of the intervention aspect of the study.

Scoring M.L.R.

Scoring of the M.L.R. was conducted on a daily basis throughout the three week period. To insure accurate measurement, the two clinicians simultaneously scored teacher stimuli (questions) and child responses (M.L.R.) in both reading and math classes for 30 minute time periods for five days, during the establishment of base rates and the initial days of data collection. Comparative data reflect agreements on the third day of counting for the mean length of responses, with a reliability coefficient of .90 (Table 3 - Clinician M.L.R.). After agreement was established for question forms and M.L.R., only one clinician recorded the type of teacher stimulus, as indicated in Table 4, and the M.L.R. of the student to the teacher stimulus for the duration of the study period.

TABLE 3

Classroom Probe For Oral Language
Mean Length Responses from Instructor Prompts

Day #	Recorder	Nonintervention Reading	Nonintervention Math	Intervention Reading
1	1	2.10	2.30	----
1	2	1.93	4.47	----
2	1	3.69	2.36	----
2	2	----	2.04	----
3	1	1.89	2.00	----
3	2	1.87	1.27	----
4	1	2.41	1.49	----
4	2	2.68	1.43	----
5	1	1.97	1.18	----
5	2	2.35	1.19	----
6	1	----	1.05	----
6	2	3.19	2.00	4.32
7	2	2.58	2.09	3.08
8	2	2.73	1.51	----
9	2	2.71	1.25	4.53
10	2	3.78	1.45	4.16
11	2	1.36	1.53	6.14

TABLE 4

Occurrences of Prompts and Corresponding MLRs
in Nonintervention Reading/Math
for Baseline Days 2-5

Recorder 1

Prompt	Nonintervention Reading			Nonintervention Math		
	# Times Prompt Used	% Prompt Used	MLR	# Times Prompt Used	% Prompt Used	MLR
What	81	38.39	1.93	53	38.41	1.64
Who	10	4.74	1.50	--	----	----
Where	14	6.64	3.21	13	9.42	----
When	3	1.42	1.33	--	----	----
Which	1	.47	0.00	--	----	----
Can	5	2.37	1.60	3	2.17	1.67
Whose	5	2.37	1.40	--	----	----
How	14	6.64	3.29	42	30.43	1.36
Why	15	7.11	4.13	1	.72	0.00
Tell me	2	.95	3.00	--	----	----
Is/Are	13	6.16	1.46	7	5.07	.86
Do/Does/Did	23	10.90	.96	10	7.24	1.50
What +	10	4.74	2.70	1	.72	0.00
Could	--	----	----	--	----	----
Would	8	3.79	.88	--	----	----
Will	--	----	----	--	----	----
Shall	--	----	----	--	----	----
Fill-in-blank	--	----	----	--	----	----
Other	7	3.32	.11	8	5.80	1.75
Total	211			138		

Procedure-Non-intervention

The non-intervention aspect of the study required no modification of teacher stimuli (types of questions). The teacher conducted her usual reading sessions using the questions directed from the reading curriculum guide. The teacher stimulus was classified and marked in the established manner, and the number of words in a child's response was counted and recorded during thirty minute time periods.

Procedure-Intervention

The teacher was given the stimulus classifications (question forms) which were found to elicit longer student responses. She was encouraged to do the following:

1. To use the questions which were found to stimulate longer student responses.

2. To avoid questions which required single word responses.

3. To not accept a single word response, ask "Tell me more" or "Tell me in a sentence."

4. To rephrase the questions in the curriculum guide which were being utilized when doing so would encourage longer responses.

5. Gain awareness of actual prompts utilized in the curriculum.

6. Gain awareness of actual prompts used by himself/herself.

7. Gain awareness of certain teaching techniques which may reduce or affect teacher/student verbal interactions:

   A. Interruptions
   B. Child preference
   C. Teacher dominance of session

8. To change inappropriate techniques if they exist.

9. To encourage student verbal responses in complete sentences.

10 To reinforce appropriate student verbal responses and reshaping of inappropriate responses.

11. To become familiar with and use prompts which yield higher response lengths.

12. To become familiar with and reduce use of prompts which yield lower response lengths.

The clinician recorded the stimulus responses in the same manner as in the non-intervention step of the study. The data from both intervention and non-intervention phases was compared and analyzed.

Experimental Conditions

The students in the reading class were used as the intervention group. Counts of the M.L.R. were taken from both non-intervention and intervention aspects of the reading program. M.L.R. counts were also carried out in the math class, however, no intervention techniques were applied to this class. The inquiry established 3 sets of M.L.R. data:

1. M.L.R. - Nonintervention (No question changes) Teacher Stimulus for Reading Class.

2. M.L.R. - Controlled Question Intervention of Teacher Stimulus for Reading Class.

3. M.L.R. - No Direct Intervention through Teacher Stimulus (No question changes) for Math

Class.

Teacher Prompts

The summer school session provided a vehicle for the AEA #16 speech staff to cooperatively work with teachers to develop an intervention model which would provide the classroom teacher with specific intervention techniques. The intent was to keep the techniques simple and easy to apply without taking teacher time away from other curricular activities. The first week of the project was directed toward observation and counting of teacher stimuli (types of questions) or teacher prompts and counting the child's M.L.R. These observations allowed the staff to better perceive the various kinds of interruptions and distractions which a classroom teacher encounters. Also, the Speech/Language Clinician had the opportunity to teach aspects of the reading and math curriculum in order to gain the teachers' perspective. As a result of such participation several observable behaviors occurred which seemed to affect oral language quantity and quality in the classroom setting. Some of them were:

1. The teacher allowed the more verbal students to respond more frequently, therefore reducing oral language experiences of the less verbally agressive students.
2. Teacher interruptions: When the student was asked a specific question and the student's response was interrupted by the teacher in order to reshape the student's response. This appeared to reduce independent

reasoning and expression.

3. Teacher sentence completion: The teacher asked a question, ie. "Why was the policeman waving?" Response: "Cause he wanted the cars to move." Teacher interruption: "Yes, he wanted the cars to move across the what? Billy?" This appeared to provoke a single word response and limit some aspects of reasoning.

4. Rote Responses: The teacher provided the response, and the student repeated it word for word. This technique also appeared to reduce the need for thinking skills.

5. Teacher dominance: During communication skills activities, there were time periods from 3 to 5 minutes where there were no verbal interactions. Many of the children seemed to become distracted from the tasks at hand.

6. Curriculum restrictions: The Teacher's Guide being utilized set limited question forms.

A. The skill questions in the Curriculum guide did not appear to stimulate spontaneous answers. The questions appeared to be limited in scope and composition.

B. Comprehension skills required the students to find the place to read. The child did not have to use oral language skills to just locate the proper sentence or word.

C. The curriculum guide many times asked questions of 10-16 words in length. (Houghton

and Mifflin, 1983) The length of the stimulus combined with the ongoing distractions in the classroom may have contributed at times to limited use of language.

The baseline data which was accumulated from the first week, days one through five of teacher prompts and mean length of utterance, utilized the three following methods:
1. 19 different forms of teacher prompts were identified in the classroom setting during the 30 minute time period. The prompts were as follows:

WHAT	WHICH	WHY*	WHAT +*	SHALL
WHO	CAN	TELL ME*	COULD	FILL-IN-BLANK
WHERE	WHOSE	IS/ARE	WOULD	OTHER
WHEN	HOW*	DO/DOES/DID	WILL	

2. The mean length of response used by each child in answer to the instructor prompt was scored.
3. A daily count was made of the number of times each teacher prompt was used, the percent each teacher prompt was used, and the mean length of response for each teacher prompt.

Analysis of Data

The analysis of the data found that the most frequently occurring teacher prompts were also those which

stimulated the lowest M.L.R. (What, Who, When, Which, Can, Whose, etc.). Also identified were four prompts which were not used often, but generated a significantly higher M.L.R. (How, Why, Tell me, and What +). Tables 4 and 5, days 2-5.

TABLE 4

Occurrences of Prompts and Corresponding MLRs
in Nonintervention Reading/Math
for Baseline Days 2-5

Recorder 1

Prompt	Nonintervention Reading			Nonintervention Math		
	# Times Prompt Used	% Prompt Used	MLR	# Times Prompt Used	% Prompt Used	MLR
What	81	38.39	1.93	53	38.41	1.64
Who	10	4.74	1.50	--	----	----
Where	14	6.64	3.21	13	9.42	----
When	3	1.42	1.33	--	----	----
Which	1	.47	0.00	--	----	----
Can	5	2.37	1.60	3	2.17	1.67
Whose	5	2.37	1.40	--	----	----
How	14	6.64	3.29	42	30.43	1.36
Why	15	7.11	4.13	1	.72	0.00
Tell me	2	.95	3.00	--	----	----
Is/Are	13	6.16	1.46	7	5.07	.86
Do/Does/Did	23	10.90	.96	10	7.24	1.50
What +	10	4.74	2.70	1	.72	0.00
Could	--	----	----	--	----	----
Would	8	3.79	.88	--	----	----
Will	--	----	----	--	----	----
Shall	--	----	----	--	----	----
Fill-in-blank	--	----	----	--	----	----
Other	7	3.32	.11	8	5.80	1.75
Total	211			138		

TABLE 5

Occurrences of Prompts and Corresponding MLRs
in Nonintervention Reading/Math
for Baseline Days 2-5

Recorder 2

Prompt	Nonintervention Reading			Nonintervention Math		
	# Times Prompt Used	% Prompt Used	MLR	# Times Prompt Used	% Prompt Used	MLR
What	91	43.33	1.64	91	46.00	1.60
Who	4	1.90	1.00	--	----	----
Where	15	7.14	2.00	17	8.50	1.88
When	--	----	----	1	.50	2.00
Which	1	.48	2.00	1	.50	4.00
Can	6	2.86	2.50	2	1.00	1.00
Whose	1	.48	0.00	--	----	----
How	15	2.86	4.13	40	20.00	.88
Why	20	9.52	4.55	1	.50	0.00
Tell me	1	.48	3.00	--	----	----
Is/Are	9	4.29	1.33	4	2.00	1.25
Do/Does/Did	23	10.95	1.30	9	4.50	1.22
What +	9	4.29	2.33	13	6.50	2.62
Could	1	.48	1.00	--	----	----
Would	3	1.43	1.00	--	----	----
Will	--	----	----	--	----	----
Shall	--	5.24	----	--	----	----
Fill-in-blank	11	5.24	1.45	15	7.50	1.13
Other	11	5.24	2.09	6	3.00	1.83
Total	210			200		

The data indicated that certain teacher language, (prompts), encouraged longer M.L.R. from the student. From this study the prompts "How, Why, Tell Me and What", used in various forms, appeared to change and enhance the oral language of children in the public school setting.

It was felt that the statistics warranted intervention with the classroom teacher, utilizing the four teacher prompts which generated longer M.L.R.s. In the first session with the teacher, the speech clinicians discussed the use of the teacher prompts and encouraged the teacher to use open ended questions. The teacher was also asked the teacher to include "Tell me more", "Talk about the things that happened", etc... The students were given written and oral examples which used full sentences in answer to the teacher's requests and questions.

The second week of intervention was conducted using the above suggestions in two basic approaches. (1) The teacher followed her normal curricular approach without using the suggested changes during a thirty minute reading period. (2) Then the teacher used the intervention suggestions during reading instruction with another group. Data was recorded for the number of times each teacher prompt was used, the percent each teacher prompt was used, and the M.L.R. for each teacher prompt for both non-intervention and intervention groups.

Comparative data of non-intervention and intervention indicated the following results.

1. There was a significant decrease of those prompts earlier identified as being poor oral language stimuli indicated in Intervention Reading, Table 6. The inefficient form of "What" was utilized in non-intervention reading 116 times in a thirty minute session, which elicited an average M.L.R. of 2.08. In intervention reading the same teacher showed a reduction of the prompt "What" from 116 to 70 times, which resulted in an increase of the average M.L.R. from 2.08 to 3.51. The evaluators felt that the instructor was increasingly more aware of M.L.R. and encouraged students to use better oral language.
2. Data shows that there was a marked increase in the number and percent when the more efficient teacher prompt was utilized.
3. For those prompts which were described as being more efficient, a significantly longer M.L.R. was recorded.

Further study of the intervention scores revealed that there was a reduction in the number of times some of the efficient teacher prompts were used, but higher M.L.R. scores were recorded. The evaluators felt that this suggested the intervention procedures aided the classroom teacher in encouraging longer responses through use of language expansion techniques, such as, "Tell me more...", etc.

TABLE 6

Occurrences of Prompts and Corresponding MLRs
in Nonintervention Reading, Nonintervention Math and Intervention Reading
Days 6-11

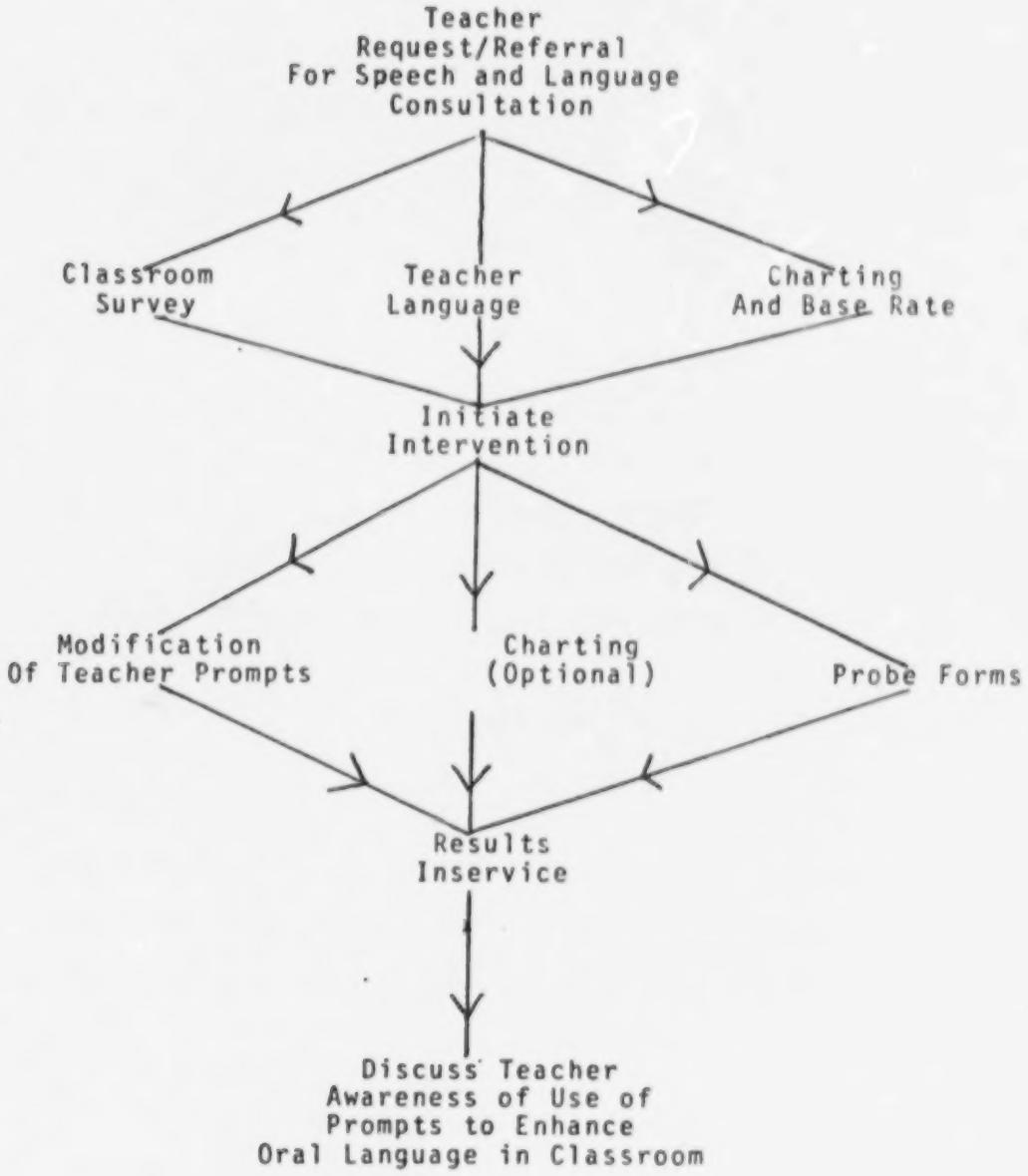
Prompt	Nonintervention Reading			Nonintervention Math			Intervention Reading		
	# Times Prompt Used	% Prompt Used	MLR	# Times Prompt Used	% Prompt Used	MLR	# Times Prompt Used	% Prompt Used	MLR
What	116	32.13	2.08	87	35.37	1.66	70	22.29	3.51
Who	22	6.09	1.40	3	1.21	6.33	11	3.50	2.45
Where	12	3.32	2.83	7	2.84	1.85	16	5.10	3.75
When	1	.28	1.00	--	----	----	--	----	----
Which	8	2.21	2.00	--	----	----	8	2.55	1.25
Can	8	2.21	.88	5	2.03	.80	1	.32	3.00
Whose	--	----	----	--	----	----	--	----	----
How	60	16.62	3.58	66	26.83	1.39	47	13.78	4.65
Why	28	7.75	4.64	4	1.62	5.50	51	16.24	6.82
Tell me	2	.55	2.50	7	2.84	5.28	6	1.91	4.83
Is/Are	6	1.66	1.33	7	2.84	1.00	6	1.91	2.00
Do/Does/Did	26	7.20	1.13	3	1.21	1.00	15	4.78	1.33
What +	20	5.54	3.60	14	5.69	2.42	61	19.43	6.19
Could	--	----	----	--	----	----	1	.32	1.00
Would	2	.55	1.00	1	.41	5.00	1	.32	1.00
Will	2	.55	2.50	--	----	----	--	----	----
Shall	--	----	----	--	----	----	--	----	----
Fill-in-blank	18	4.98	1.33	41	16.67	1.26	17	5.41	1.64
Other	30	8.31	4.66	1	.41	1.00	3	.96	6.33

Another factor which became evident from the daily M.L.R. records was a gradual change in both quanity and quality of language used by the students. The oral language in the non-intervention setting was observed to be short, nondescriptive, which many times progressed to unrelated, disruptive conversation between the students in the group. However, as the teacher prompts improved, students' attitudes toward classroom participation appeared to improve. A variety of authors have emphasized the importance of "accepting" communication environments in the clinic (Berry, 1980) as well as in the classroom setting (McBride and Levy, 1981, Phillips, 1975, Fujiki, 1984).

The post B.C.S. scores indicated that little change took place on their test except that the average number of sentences utilized for the 6-year-old group was raised from a M.L.R. of 2.13 to 4.06.

The results of this study support the assumption that oral language competence in the classroom can be enhanced by teacher awareness of which prompts derive the longest M.L.R. Also encouraging and expecting complete answers of more than one or two words, and using a cognitive approach to oral language in structured classroom activities, appear to increase oral language production.

CONTINUUM OF INSERVICE COMPONENTS



Inservice

As previously mentioned, teacher surveys indicated that they see a need to improve their student's expressive language abilities, and also that some misconceptions exist regarding the classroom teacher's interpretation of children's language functioning.

While teachers frequently request aid in implementing better verbal communication tasks within the classroom, daily demands of the school day leave little time for the teacher to implement such tasks. The same appears to apply for the school Speech/Language Clinician since his/her daily demands with individual and group speech/language therapy and planning, etc., leave little time to aid the classroom teacher with the strengthening of verbal communication tasks within the class.

The purpose of this inservice is to show an efficient yet economical system to aid the classroom teacher in prompt modification to elicit longer verbal responses from the students, which in turn, may enhance each child's expressive language skills.

Following is an outline of the procedures which this intervention program utilized, beginning with teacher survey of communication problems and ending with a discussion of the study results.

The Communication Survey Questionnaire

The Speech Clinician should provide the questionnaire form (Form 1 - Addendum) to the teachers in his/her building(s) to obtain information regarding their concerns regarding their students' oral language in the classroom. After the questionnaire has been collected, the school Speech Clinician should organize a meeting or group of meetings in which to discuss the results of the questionnaire, and address various issues which are of concern to the teachers.

Intake of Baseline Prompt and Child Response Data

The Speech Clinician should schedule with the teacher(s) agreed upon time segments in which to observe various classrooms to collect initial, baseline (non-intervention) data. The Clinician is likely to be most successful if the teacher is approached as a professional colleague rather than someone needing the aid of an expert. Form 2 in the Addendum should be used to chart the type of prompts utilized by the teacher and the number of words used by the child in verbal response to each teacher prompt.

During this study, two Clinicians recorded prompts and responses in thirty minute time segments for five days in

order to establish reliability. However, in most work settings, one Clinician will most likely obtain this data and should use short time segment samples. It was found that in thirty minutes approximately three pages of the "Classroom Probe for Oral Language" form was used. It should be remembered that during the baseline data collection phase, the teacher should not be encouraged to modify his/her teaching presentation. This baseline data must reflect the methodology that the teacher and the curriculum are utilizing without outside influences.

Data Placement on Various Charts

When the Clinician has completed the classroom observations in collecting baseline data, he/she may then use the Classroom Probe for Oral Language Summary (Form 3 - Addendum). This is a three page form which allows the recorder to analyze each prompt that the instructor used per class, per time segment. The recorder charts each response from each teacher prompt by recording the number of words in the appropriate box. The total number of responses for each teacher prompt allows analysis of:

1. The number of times that each teacher prompt was utilized.

2. The percent of the time that each teacher prompt was used in the particular time segment. This is calculated by dividing the number of responses for each prompt by the total number of responses obtained in the time segment.

3. The mean length response for each prompt. This is calculated by dividing the total number of words given in response to each prompt by the number of responses for each prompt.

This form also allows for the recording of the response range for each prompt.

At the bottom of the last page of this form is a grid which allows the recorder to chart the occurrence of the different lenghts of responses. In other words, how many 0 word responses, 1 word responses, 2 word responses and so on up to nine word responses, occurred in the particular time segment of observation. When collecting baseline data, this information is recorded in the "Non-intervention" column. When data is being collected during the intervention phase, it is recorded in the intervention column. The "WPM" column allows the recorder to analyze the words per minute (0-9). This is calculated by dividing the total number of words in a time segment by the number of minutes in the time segment.

The utilization of this grid also provides for an analysis of the total mean length response for that observed time segment. This is calculated by taking each response length and multiplying by its respective times of occurrence. The sum of the products is then divided by the total of the occurrences which result in the mean length response for that time segment.

*Example:

# words in response	# times response occurred	
0	13 X 0	= 0
1	59 X 1	=59
2	15 X 2	=30
8	0 X 8	= 0
9	2 X 9	=18
TOTAL	119	225

225/119=1.89 M.L.R.

* This example is only a section of the total chart, but the entire chart was used in calculating the total figures.

The data from each Classroom Probe for Oral Language Summary Form (Form 3 - Addendum), can be then put into chart form so the reader may easily see: (1) the number of times each prompt was used, (2) the percent of the time each prompt was used, and (3) the mean length response for each prompt. Observe Table 7 which shows such information obtained in a thirty minute time segment.

TABLE 7

Daily Mean Length Responses To Prompts
Utilized by Instructor In 1 (½) Hour Segment
Day 2 - Nonintervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	30	62.50	2.10
Who	0	0.00	0.00
Where	2	4.16	.50
When	0	0.00	0.00
Which	1	2.08	4.00
Can	0	0.00	0.00
Whose	0	0.00	0.00
How	2	4.16	0.00
Why	0	0.00	0.00
Tell me	0	0.00	0.00
Is/Are	0	0.00	0.00
Do/Does/Did	3	6.25	1.00
What +	6	12.50	3.70
Could	0	0.00	0.00
Would	0	0.00	0.00
Will	0	0.00	0.00
Shall	0	0.00	0.00
Fill-in-blank	4	8.33	1.50
Other	0	0.00	0.00
	48		Ave. 2.13

Initiation of Intervention Procedures

Following baseline data collection, the Clinician should then meet with the teacher(s) to discuss the data summary. Individual Clinicians will, of course, discuss findings in various ways. In our study, we showed the teacher the breakdown of the prompts which she used, and the corresponding mean length responses to each teacher prompt. We were able to show that there was a high occurrence of prompts such as "What" which yielded low response lengths in her children. We were also able to show other prompts such as, "Tell me", which were low in frequency of occurrence, but still yielded significantly high response lengths.

The teacher was then encouraged to modify her questions or prompts and use those which would most likely result in longer responses from the children. Certain teacher prompts such as "How", "Why", "Tell me", and "What +" were explained as those which yielded high response lengths and should be considered for use by the teacher.

Once the teacher was familiar with the process of prompt modification, the data collection by the Clinician started over again, except for distinguishing between intervention and non-intervention data.

The teacher should conduct a regular session closely

adhering to the curriculum guide while the Clinician records the instructor prompts and student responses for a thirty minute time segment. This is considered the non-intervention procedure.

The teacher should then conduct a similiar session with another group. She, at this time should not adhere strictly to the curriculum guide, but, instead modify her prompts in order to elicit longer verbal responses from the children. The Clinician should record this data as the intervention procedure.

It should be noted that in our study, individual groups of children in the reading class, did not stay within the intervention or non-intervention category exclusively. The group that may have been recorded as those undergoing the non-intervention curriculum one day, may have been those undergoing the intervention curriculum the next day.

Intervention/Non-intervention curriculums were recorded for five days. It is recommended that in future studies such data be obtained over a longer time period. Studies should be conducted to determine if such procedures result in carryover of increased M.L.R.'s to other speaking situations.

As previously stated, the Classroom Probe for Oral Language Summary Form (Form 2 - Addendum) was used to chart

and analyze the data taken from the Classroom Probes for Oral Language Forms used by the Clinician in the classroom. The information is charted the same on both forms except for distinguishing between intervention and non-intervention data on the summary form. The information is then transferred to a chart which more clearly displays the prompts, their occurrence, their percent of occurrence, and mean length response.

Analysis of Data Non-intervention/Intervention

By observing Table 6 in the areas of Non-intervention Reading, Non-intervention Math, and Intervention Reading, we can indicate the following tendencies:

1. A high incidence of prompts which yield low M.L.R.s, (What, Who, Where, Do/Does/Did, and Fill-In-Blank), in non-intervention reading and math.

2. A low incidence of prompts which yield higher M.L.R.s. (Why - Math non-intervention, Tell me, What + - Math non-intervention). Exceptions - How, Why - Reading non-intervention, What + - Reading non-intervention.

3. Mean length responses increased for prompts which tended to yield low M.L.R.s in Intervention reading.

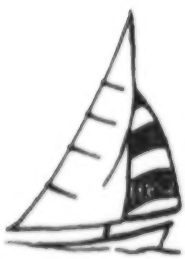
Providing Teachers with Results of Study

Once all information is obtained, compiled, charted, and typed the Speech Clinicians should again organize

meetings to discuss the results of their study. A very important note for the Clinician to remember is not to convey to the teacher(s) that the results , if positive, are truly indicative of a need for the teacher to change her teaching style and presentation. Instead, all educators need to be fully aware of how their curricula and teaching procedures may enhance their students' verbal communication skills to the best of their individual potential.

Summary/Conclusion

In summary, the objectives of this inquiry were directed toward helping the classroom professional assess the needs of oral language improvement in the classroom, and to provide intervention techniques which do not require a radical change in curriculum teaching philosophy, or interruptions in the daily classroom schedule. Data from this inquiry is obviously limited to the 23 children in the summer school class and to the teacher who participated in the study. However, the statistics suggest the merit in the methods used to enhance oral language in the classroom. We feel that additional use and study of this method in regular classrooms in the school district may help to bring about development of an effective model for clinicians to follow when addressing the concerns of oral language in the educational setting.



ADDENDUM

FORM 1
TEACHER SURVEY

GRADE

1. Do you think communicative disorders interfere with educational progress?

Mild	Yes	No
Moderate	Yes	No
Severe	Yes	No

2. Which of these specific speech problems do you perceive as interfering with educational progress?

   a. language
   b. articulation
   c. voice
   d. stuttering

3. Please list in what specific ways speech and language problems interfere with each of the following. (Example: poor discrimination skills might interfere with reading).

   a. Overall academic ability
      1.
      2.
      3.
      4.
      5.

   b. General Academic (Science-Social Studies)
      1.
      2.
      3.
      4.
      5.

   c. Reading
      1.
      2.
      3.
      4.
      5.

FORM 2
CLASSROOM PROBE FOR ORAL LANGUAGE

PROMPT CODE:
WHAT=A WHO=B WHERE=C WHEN=D WHICH=E CAN=F WHOSE=G HOW=H WHY=I TELL ME=J IS/ARE=K DO/DOES/DID=L WHAT + (IF)=M COULD=N WOULD=O WILL=P SHALL=Q FILL-IN-BLANK=R OTHER (SPECIFY)=S

PROMPTS USED BY INSTRUCTOR	CHILD'S # OF WORDS USED
1. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
2. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
3. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
4. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
5. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
6. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
7. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
8. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
9. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
10. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
11. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
12. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
13. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
14. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
15. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
16. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
17. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
18. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
19. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
20. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
21. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
22. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
23. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
24. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9
25. A B C D E F G H I J K L M N O P Q R S	0 1 2 3 4 5 6 7 8 9

d. Math
   1.
   2.
   3.
   4.
   5.

e. Social and Emotional Adjustment
   1.
   2.
   3.
   4.
   5.

4. Which of the above categories do you feel present the most difficulty for students with communication disorders?

5. Do you have any suggestions (other than direct therapy by a Speech Clinician) to alleviate the problem?

CLASSROOM PROBE FOR ORAL LANGUAGE
SUMMARY

Teacher:_____ Date:_____

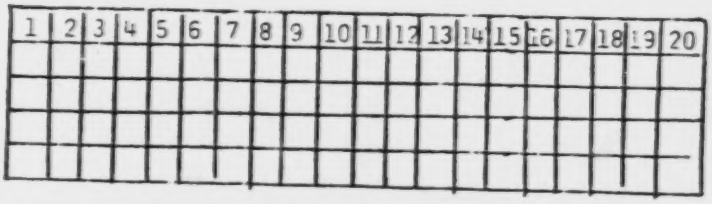
Class:_____ Examiner:_____

Prompts # of responses

What=A

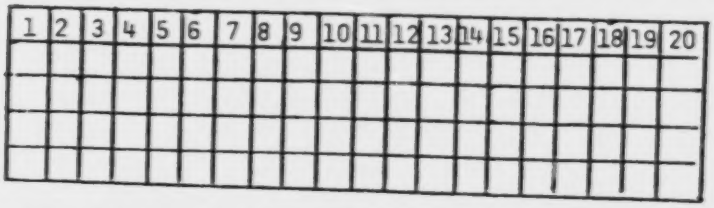
Total # "what" questions_____
Ave. mean length response_____
% of "what" questions_____
Response range_____

Who=B



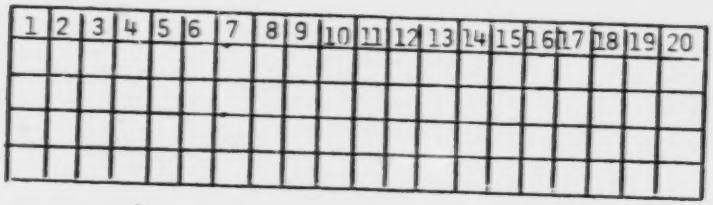
Total # "who" questions_____
Ave. mean length response_____
% of "who" questions_____
Response range_____

Where=C



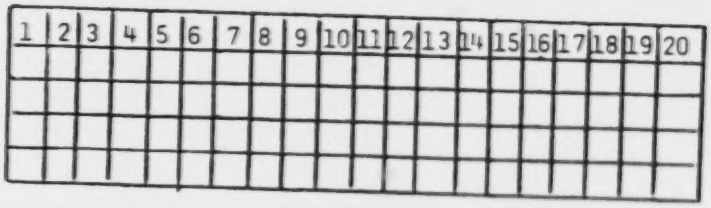
Total # "where" questions_____
Ave. Mean length response_____
% of "where" questions_____
Response range_____

When=D



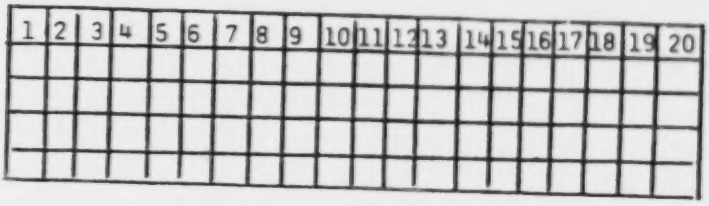
Total # "when" questions_____
Ave. mean length response_____
% of "when" questions_____
Response range_____

Which=E



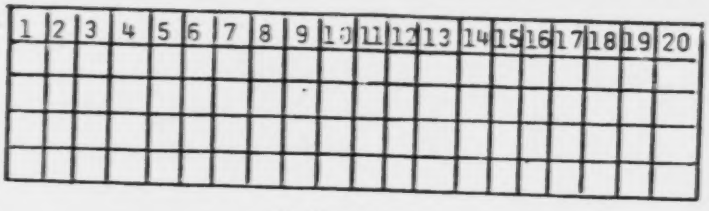
Total # "which" questions_____
Ave. mean length response_____
% of "which" questions_____
Response range_____

Can=F



Total # "can" questions_____
Ave. mean length response_____
% of "can" questions_____
Response range_____

Whose=G



Total # "whose" questions_____
Ave. mean length response_____
% of "whose" questions_____
Response range_____

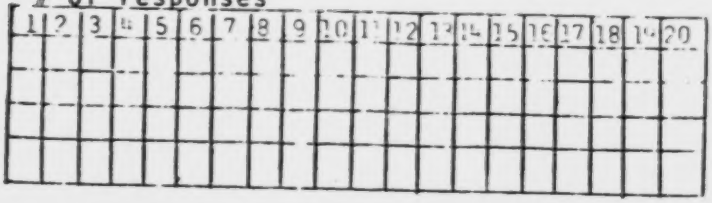
CLASSROOM PROBE FOR ORAL LANGUAGE
SUMMARY

Teacher:_____ Date:_____

Class:_____ Examiner:_____

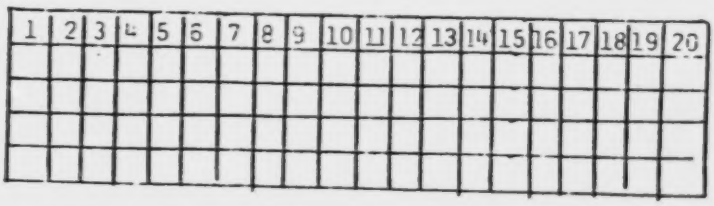
Prompts # of responses

How=H



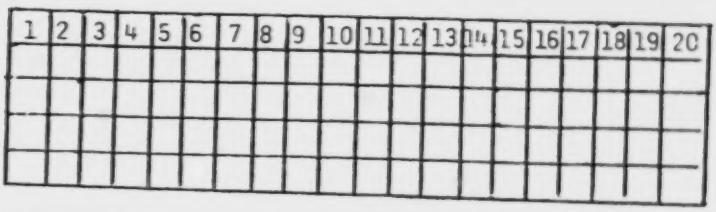
Total # "how" questions_____
Ave. mean length response_____
% of "how" questions_____
Response range_____

Why=I



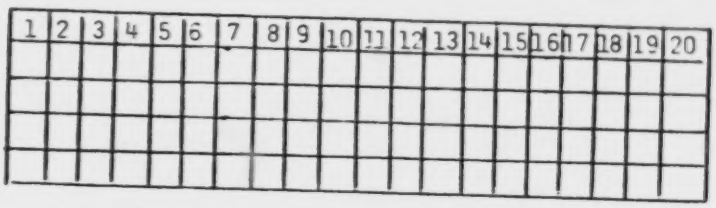
Total # "why" questions_____
Ave. mean length response_____
% of "why" questions_____
Response range_____

Tell Me=J



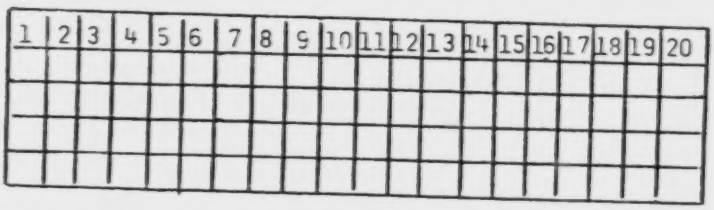
Total # "tell me" questions_____
Ave. mean length response_____
% of "tell me" questions_____
Response range_____

Is/are=K



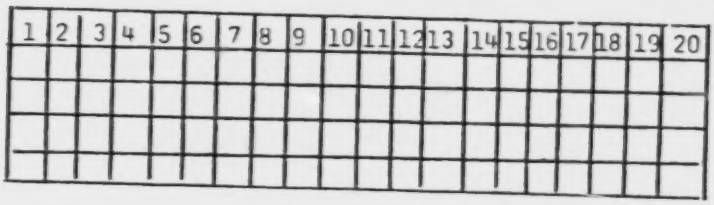
Total # "is/are" questions_____
Ave. mean length response_____
% of "is/are" questions_____
Response range_____

Do
Does=L
Did



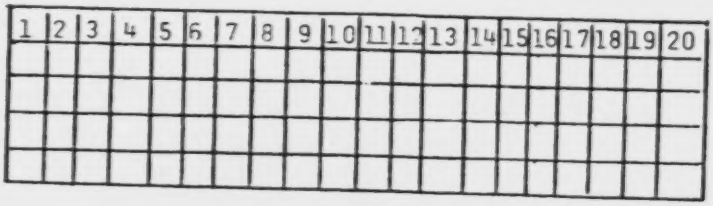
Total # "do" questions_____
Ave. mean length response_____
% of "do/does/did" quest._____
Response range_____

What
+ =M
(if)



Total # "what(if)" questions_____
Ave. mean length response_____
% of "what(if)" quest._____
Response range_____

Could=N



Total # "could" questions_____
Ave. mean length response_____
% of "could" questions_____
Response range_____

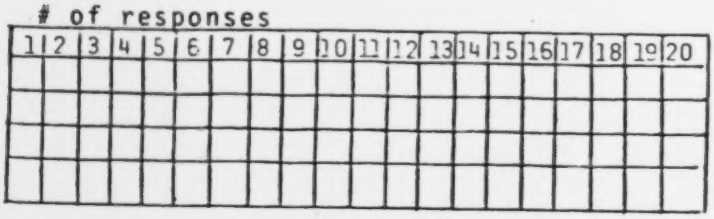
CLASSROOM PROBE FOR ORAL LANGUAGE
SUMMARY

Teacher: _____ Date: _____

Class: _____ Examiner: _____

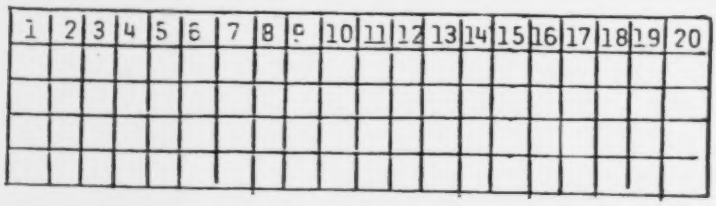
Prompts · # of responses

Would=O



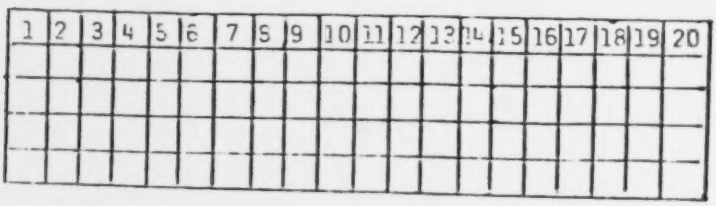
Total # "would" questions _____
Ave. mean length response _____
% of "would" questions _____
Response range _____

Will=P



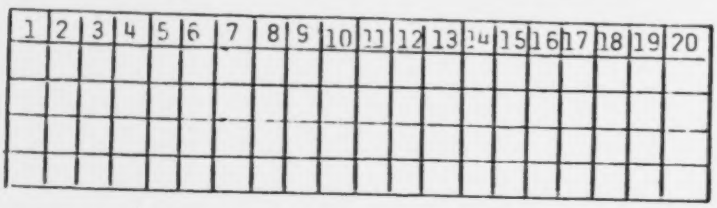
Total # "will" questions _____
Ave. mean length response _____
% of "will" questions _____
Response range _____

Shall=Q



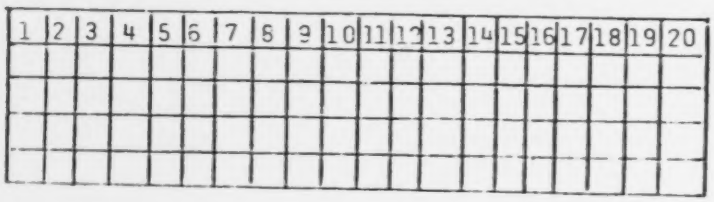
Total # "shall" questions _____
Ave. mean length response _____
% of "shall" questions _____
Response range _____

Fill-in-=R Blank



Total # "fill" questions _____
Ave. mean length response _____
% of "fill" questions _____
Response range _____

Other=S Specify



Total # "other" questions _____
Ave. mean length response _____
% of "other" questions _____
Response range _____

	Non Intervention	WPM	Intervention	WPM
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
Total				

FORM 4

Other - Specify Prompts

Say it again.	If...
Say them...	If...
Want to...	If...
Everybody...	If...
Use that...	If...
Say it again.	Have you ever...
Say it in a sentence.	Two and four will give me nine?
Say it in a sentence.	Everybody...
Take one away...	Everybody...
Have you...	Find what mother... and read.
If...	Read what...
If...	Read...
Hasn't She...	Read...
Or/from...	Read what...
Or/from...	Read what...
Or...	Read...
If...	Read...
If...	Read...
If...	Read...
If...	Read...
It's...	Read...
If...	Just cheese...

Daily Mean Length Responses To Prompts
Utilized by Instructor In 1 (½) Hour Segment
Day 2 - Nonintervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	30	62.50	2.10
Who	0	0.00	0.00
Where	2	4.16	.50
When	0	0.00	0.00
Which	1	2.08	4.00
Can	0	0.00	0.00
Whose	0	0.00	0.00
How	2	4.16	0.00
Why	0	0.00	0.00
Tell me	0	0.00	0.00
Is/Are	0	0.00	0.00
Do/Does/Did	3	6.25	1.00
What +	6	12.50	3.70
Could	0	0.00	0.00
Would	0	0.00	0.00
Will	0	0.00	0.00
Shall	0	0.00	0.00
Fill-in-blank	4	8.33	1.50
Other	0	0.00	0.00
	48		Ave. 2.13

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 3 - Nonintervention

Prompt	# Times Prompt Used		% Prompt Used		Mean Length Response	
Recorder	1	2	1	2	1	2
What	60	49	40.50	35.70	2.00	1.11
Who	4	4	2.70	2.91	1.25	1.00
Where	13	11	8.78	8.02	2.16	2.45
When	2	--	1.35	----	1.50	----
Which	1	1	.67	.73	0.00	2.00
Can	5	3	3.37	2.19	1.60	3.33
Whose	4	1	2.70	.73	1.50	0.00
How	17	18	11.48	13.13	1.52	1.50
Why	3	4	2.02	2.91	5.66	3.75
Tell me	2	1	1.35	.73	3.00	3.00
Is/Are	10	5	6.75	3.65	1.60	.40
Do/Does/Did	16	17	10.81	12.41	1.31	1.41
What +	11	9	7.43	6.57	2.45	2.22
Could	--	--	----	----	----	----
Would	--	--	----	----	----	----
Will	--	--	----	----	----	----
Shall	--	--	----	----	----	----
Fill-in-blank	--	6	----	4.38	----	1.16
Other	--	8	----	5.83	----	2.50
Total	148	137				

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 4 - Nonintervention

Prompt	# Times Prompt Used		% Prompt Used		Mean Length Response	
Recorder	1	2	1	2	1	2
What	33	42	33.33	.35	1.82	1.76
Who	2	2	2.02	1.67	1.00	1.00
Where	10	13	10.10	10.83	2.60	2.92
When	1	2	1.01	1.67	1.00	1.50
Which	--	--	----	----	----	----
Can	3	2	3.03	1.67	1.67	1.00
Whose	1	2	1.01	1.67	1.00	1.00
How	16	13	16.16	10.83	2.63	2.85
Why	6	9	6.06	7.50	4.33	3.56
Tell me	--	--	----	----	----	----
Is/Are	4	5	4.04	4.17	1.25	1.20
Do/Does/Did	9	6	9.09	5.00	.89	1.00
What +	--	6	----	5.00	----	2.17
Could	--	--	----	----	----	----
Would	2	--	----	----	.50	----
Will	--	--	----	----	----	----
Shall	--	--	----	----	----	----
Fill-in-blank	--	9	----	7.50	----	1.33
Other	12	9	12.12	7.50	1.25	1.56
Total	99	120				

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 5 - Nonintervention

Prompt	# Times Prompt Used		% Prompt Used		Mean Length Response	
Recorder	1	2	1	2	1	2
What	41	42	40.59	42.42	1.61	1.40
Who	4	5	3.96	5.05	2.00	1.20
Where	4	4	3.96	4.04	1.50	1.75
When	--	--	----	----	----	----
Which	--	--	----	----	----	----
Can	--	--	----	----	----	----
Whose	--	--	----	----	----	----
How	23	22	22.77	22.22	1.52	1.50
Why	7	8	6.93	8.08	4.00	5.50
Tell me	--	--	----	----	----	----
Is/Are	6	--	5.94	----	.67	----
Do/Does/Did	8	6	7.92	6.06	1.00	1.16
What +	--	1	----	1.01	----	0.00
Could	1	1	.99	1.01	1.00	1.00
Would	6	3	5.94	3.03	1.00	1.00
Will	--	--	----	----	----	----
Shall	--	--	----	----	----	----
Fill-in-blank	--	7	----	7.07	----	1.14
Other	1	--	.99	----	1.00	----
Total	101	99				

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 6 - Nonintervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	38	36.89	2.82
Who	11	10.68	.45
Where	4	3.88	2.00
When	--	----	----
Which	2	1.94	2.50
Can	2	1.94	1.00
Whose	--	----	----
How	24	23.30	3.38
Why	10	9.70	4.30
Tell me	1	.97	0.00
Is/Are	5	4.85	.80
Do/Does/Did	5	4.85	2.40
What +	--	----	----
Could	--	----	----
Would	1	.97	1.00
Will	--	----	----
Shall	--	----	----
Fill-in-blank	--	----	----
Other	--	----	----
Total	103		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 6 (½) Hour Segments
Day 6 - Intervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	18	24.66	3.00
Who	--	----	----
Where	6	8.22	4.83
When	--	----	----
Which	--	----	----
Can	--	----	----
Whose	--	----	----
How	11	15.07	4.64
Why	11	15.07	6.55
Tell me	--	----	----
Is/Are	2	2.74	1.00
Do/Does/Did	8	10.96	1.63
What +	15	20.55	6.27
Could	--	----	----
Would	--	----	----
Will	--	----	----
Shall	--	----	----
Fill-in-blank	2	2.74	1.50
Other	--	----	----
Total	73		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 7 - Nonintervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	38	34.55	1.92
Who	3	2.73	5.00
Where	--	----	----
When	--	----	----
Which	1	.91	2.00
Can	4	3.64	.75
Whose	--	----	----
How	15	13.64	3.47
Why	3	2.73	4.67
Tell me	7	6.36	5.29
Is/Are	2	1.82	1.00
Do/Does/Did	8	7.27	.88
What +	14	12.73	2.43
Could	--	----	----
Would	--	----	----
Will	--	----	----
Shall	--	----	----
Fill-in-blank	14	12.73	1.50
Other	1	.91	1.00
Total	110		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 1 (½) Hour Segment
Day 7 - Intervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	25	33.33	3.76
Who	3	4.00	1.67
Where	2	2.67	3.60
When	--	----	----
Which	7	9.33	1.00
Can	--	----	----
Whose	--	----	----
How	23	30.67	4.35
Why	1	1.33	9.00
Tell me	--	----	----
Is/Are	1	1.33	1.00
Do/Does/Did	5	6.67	1.00
What +	1	1.33	4.00
Could	1	1.33	1.00
Would	--	----	----
Will	--	----	----
Shall	--	----	----
Fill-in-blank	6	8.00	1.33
Other	--	----	----
Total	75		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 8 - Nonintervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	29	26.61	2.41
Who	7	6.42	3.14
Where	3	2.75	3.33
When	--	----	----
Which	5	4.59	1.80
Can	2	1.83	1.00
Whose	--	----	----
How	16	14.68	1.69
Why	4	3.67	3.25
Tell me	2	1.83	2.50
Is/Are	1	.92	4.00
Do/Does/Did	4	3.67	4.00
What +	10	9.17	2.50
Could	--	----	----
Would	2	1.83	1.00
Will	2	1.83	2.50
Shall	--	----	----
Fill-in-blank	20	18.35	1.20
Other	2	1.83	3.00
Total	109		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 9 - Nonintervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	32	36.36	1.94
Who	2	2.27	3.00
Where	6	6.82	2.67
When	--	----	----
Which	1	1.14	1.00
Can	2	2.27	1.00
Whose	--	----	----
How	19	21.59	1.89
Why	4	4.55	7.50
Tell me	--	----	----
Is/Are	5	5.68	1.00
Do/Does/Did	6	6.82	.83
What +	1	1.14	1.00
Could	--	----	----
Would	1	1.14	0.00
Will	--	----	----
Shall	--	----	----
Fill-in-blank	9	10.23	1.33
Other	--	----	----
Total	88		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 1 (½) Hour Segment
Day 9 - Intervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	15	24.95	3.93
Who	8	13.11	2.88
Where	3	4.92	4.33
When	--	----	----
Which	1	1.64	3.00
Can	1	1.64	3.00
Whose	--	----	----
How	5	8.20	4.60
Why	3	4.92	8.00
Tell me	6	9.84	4.33
Is/Are	--	----	----
Do/Does/Did	1	1.64	1.00
What +	16	26.22	6.50
Could	1	1.64	1.00
Would	1	1.64	1.00
Will	--	----	----
Shall	--	----	----
Fill-in-blank	--	----	----
Other	--	----	----
Total	61		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 10- Nonintervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	34	32.38	1.47
Who	--	----	----
Where	7	6.67	2.00
When	--	----	----
Which	--	----	----
Can	--	----	----
Whose	--	----	----
How	26	24.76	2.08
Why	11	10.48	4.73
Tell me	--	----	----
Is/Are	--	----	----
Do/Does/Did	5	4.76	1.00
What +	6	5.71	5.00
Could	--	----	----
Would	1	.95	5.00
Will	--	----	----
Shall	--	----	----
Fill-in-blank	3	2.86	2.00
Other	12	11.43	0.00
Total	105		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 1 (½) Hour Segment
Day 10- Intervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	10	17.86	2.10
Who	--	----	----
Where	--	----	----
When	--	----	----
Which	--	----	----
Can	--	----	----
Whose	--	----	----
How	8	14.23	5.63
Why	9	16.07	6.33
Tell me	--	----	----
Is/Are	3	5.36	3.00
Do/Does/Did	1	1.79	1.00
What +	17	30.36	5.71
Could	--	----	----
Would	--	----	----
Will	--	----	----
Shall	--	----	----
Fill-in-blank	7	12.50	1.29
Other	1	1.79	9.00
Total	56		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 2 (½) Hour Segments
Day 11- Nonintervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	40	36.36	1.38
Who	2	1.81	1.00
Where	--	----	----
When	1	.90	1.00
Which	1	.90	2.00
Can	3	2.72	.67
Whose	--	----	----
How	27	24.54	2.04
Why	--	----	----
Tell me	--	----	----
Is/Are	2	1.81	1.00
Do/Does/Did	5	4.54	1.00
What +	2	1.81	7.00
Could	--	----	----
Would	--	----	----
Will	--	----	----
Shall	--	----	----
Fill-in-blank	11	.10	1.00
Other	16	14.54	.50
Total	110		

Daily Mean Length Responses To Prompts
Utilized by Instructor In 1 (½) Hour Segment
Day 11- Intervention

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	2	3.64	4.00
Who	--	----	----
Where	5	9.09	2.20
When	--	----	----
Which	--	----	----
Can	--	----	----
Whose	--	----	----
How	--	----	----
Why	32	58.18	6.78
Tell me	--	----	----
Is/Are	--	----	----
Do/Does/Did	--	----	----
What +	12	21.81	6.58
Could	--	----	----
Would	--	----	----
Will	--	----	----
Shall	--	----	----
Fill-in-blank	2	3.64	4.00
Other	2	3.64	5.00
Total	55		

Mean Length Responses (Words)
To All Prompts Utilized by Instructor
In Eleven Days/2 + 3 (½) Hour Segments Per Day

Prompt	# Times Prompt Used	% Prompt Used	Mean Length Response
What	582	35.08	2.11
Who	57	3.44	1.84
Where	91	5.48	2.73
When	6	1.33	.39
Which	21	1.27	1.67
Can	28	1.67	1.43
Whose	8	.53	1.13
How	290	17.48	2.52
Why	127	7.66	5.50
Tell me	19	1.15	4.21
Is/Are	54	3.25	1.31
Do/Does/Did	110	6.63	1.31
What +	122	7.35	4.51
Could	4	.24	1.00
Would	17	1.02	1.12
Will	2	.13	2.50
Shall	0	0.00	0.00
Fill-in-blank	58	3.50	2.26
Other	66	4.35	1.33
Total	1659		

Classroom Probe For Oral Language
Mean Length Responses from Instructor Prompts

Day #	Recorder	Nonintervention Reading	Nonintervention Math	Intervention Reading
1	1	2.10	2.30	----
1	2	1.93	4.47	----
2	1	3.69	2.36	----
2	2	----	2.04	----
3	1	1.89	2.00	----
3	2	1.87	1.27	----
4	1	2.41	1.49	----
4	2	2.68	1.43	----
5	1	1.97	1.18	----
5	2	2.35	1.19	----
6	1	----	1.05	----
6	2	3.19	2.00	4.32
7	2	2.58	2.09	3.08
8	2	2.73	1.51	----
9	2	2.71	1.25	4.53
10	2	3.78	1.45	4.16
11	2	1.36	1.53	6.14

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